ABDULLAYEV, G.B.; ALIYEV, G.M.; BASHSHALIYEV, A.A.; KERIMOV, I.G.

Heat conductivity of some compounds of the type $A^{III}B^{V}$. Trudy Inst. fiz. AN Azerb. SSR 11:46-51 '63. (MIRA 16:4)
(Semiconductors—Thermal properties)

ACC NR: AP7003335 SOURCE CODE: UR/0076/66/040/012/3036/3089

AUTHOR: Mamedov, K. K.; Korimov, I. G.; Mokhtiyev, M. I.; Veliyev, M. I.

ORG: Physics Institute, Academy of Sciences, AzerbSSR (Institut fiziki Akademii nauk AzerbSSR)

TITLE: Thermodynamic studies at low temperatures

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 12, 1966, 3086-3089

TOPIC TAGS: selenium, heat capacity, entropy, enthalpy, heat conductivity, thermodynamic analysis

ABSTRACT: The heat capacity c_p of amorphous selenium was measured at 147 points in the range of 56-332°K. An anomalous increase of the heat capacity around the glass transition temperature was established, and it was found that T_g = 303.4°K. In the 56-150°K range, the results obtained obey Tarasov's equation for noninteracting chains,

$$c_i = D_i(\theta_i/T) = 6R(T/\theta_i)\int_0^{\theta_i/T}\frac{x\,dx}{e^x-1} - 3R(\theta_i/T)[\exp(\theta_i/T)-1]^{-1}, \qquad (1)$$

where $\theta_1 = h\nu_{max}/k$ and $x = h\nu/kT$, with θ = 364°K. It was found that the hole part of the thermal conductivity is equal to 14.53 J/g atom deg, and depends on the cooling rate of the sample. The following quantities were determined:

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ACC NR: AP7003335

$$S_{0-298.16} = 48.40 \pm 0.80 \text{ J/g atom deg},$$

$$H_{298.16} - H_{54} = 5340 \pm 10 \text{ J/g atom}.$$

Orig. art. has: 2 figures, 2 tables and 3 formulas.

SUB CODE: 07/ SUBM DATE: 17Nov65/ ORIG REF: 003/ OTH REF: 006

Card 2/2

31515
S/058/61/000/010/077/100
A001/A101

26.2532

AUTHORS: Eliyev, G.M., Eliyev, B.D., Kerimov, I.K.

TITLE: Temperature dependence of heat conductivity of selenium with cadmium admixture

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 252, abstract 10E182 ("Izv. AN AzerbSSR. Ser. fiz.-matem. i tekhn. n.", 1960, no. 6, 99-104, Azerb., Russian summary)

TEXT: Heat conductivity (λ) of amorphous and crystalline selenium was studied in the temperature range from 84 to 373°K by the stationary method, as well as effect on it of Cd admixture and its dependence on temperature. It was found that with increasing Cd content up to 0.125% the λ-value of Se decreases attaining a minimum, and increases again at a further increase of Cd, approaching its initial value. With decreasing temperature the λ-value of crystalline Se with Cd admixture grows, whereas that of amorphous Se decreases, the latter phenomenon being explained by a reduction of heat capacity.

[Abstracter's note: Complete translation]

Card 1/1

X

KAUFMAN, V.P.; KAZAROV, A.V.; KERIMOV, I.M.; PAL'YAN, S.A.

Economic effectiveness of the mechanization of underground well repair operations. Sbor.nauch.-tekh.inform. Azerb.inst.nauch.-tekh. inform.Ser.neft.prom. no.1:79-87 '63.

(MIRA 18:8)

SOV/124-58-3-3263

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 104 (USSR)

AUTHOR: Kerimov, K. A.

TITLE: Experimental Investigation of Elastic-plastic Deformations Due to Longitudinal Impact (Eksperimental'nyye issledovaniya uprugo-plasticheskikh deformatsiy pri prodol'nom udare)

PERIODICAL: Dokl. AN AzerbSSR, 1956, Vol 12, Nr 10, pp 695-700

ABSTRACT: The dynamic stress-strain relationship (σ-vs-ϵ) under longitudinal impact was determined for unannealed aluminum. Assuming the dynamic modulus of elasticity as equal to the static and assuming a single dynamic $\sigma - \epsilon$ curve (for all loading rates), the author determines the required relationship by measuring the impact velocity and the residual strain. A similar problem was investigated by Johnson J. E., Wood D. S., and Clark D. S. (J. Appl. Mech., 1953, Vol 20, Nr 4, pp. 523-529. RZhMekh, 1955, Nr 6, abstract 3227).

N. F. Lebedev

Card 1/1

SOV/124-58-2-2349

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 2, p 112 (USSR)

AUTHOR: Kerimov, K. A.

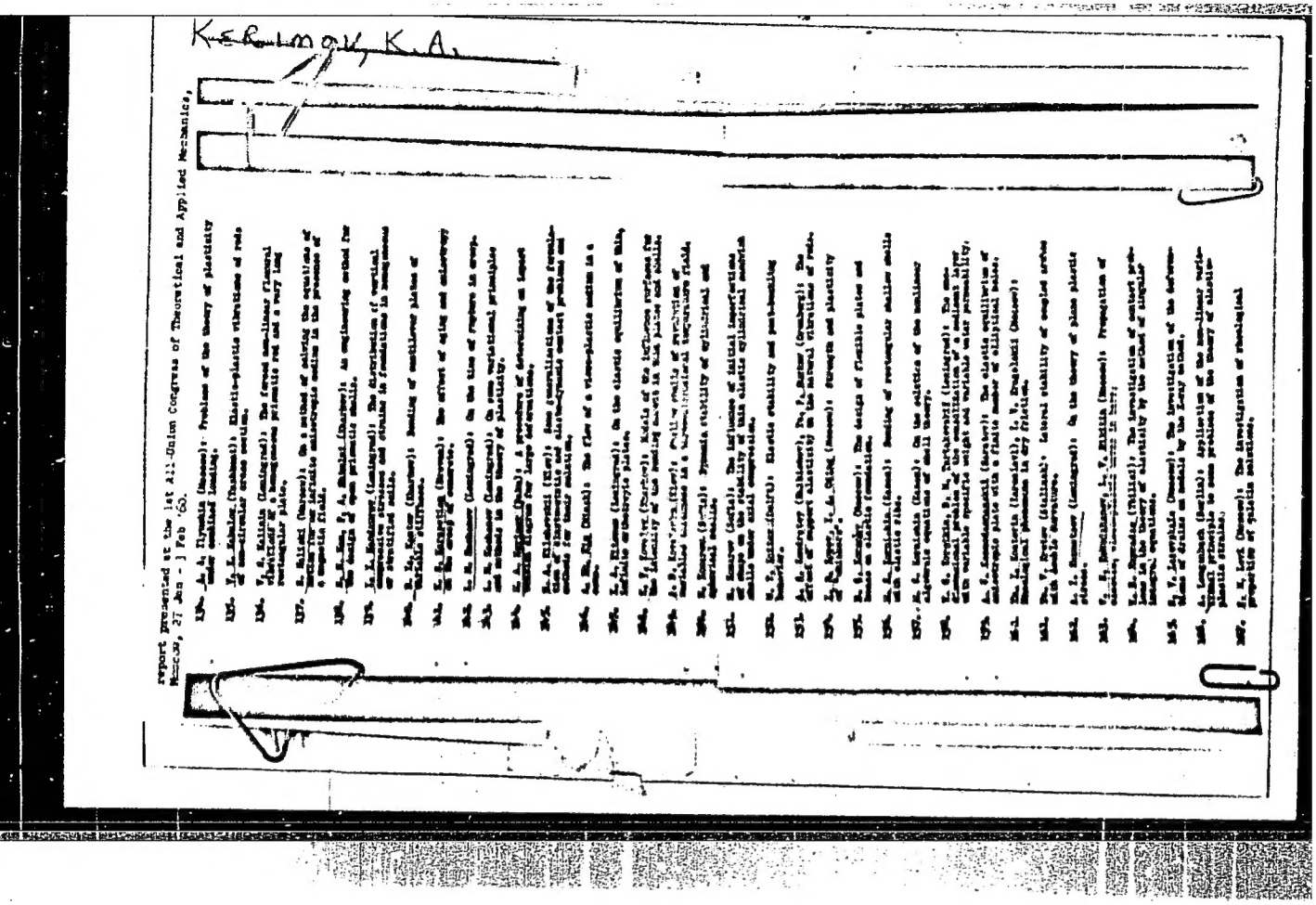
TITLE: The Transverse Impact on a Flexible Thread (Poperechnyy udar po gibkoy niti)

PERIODICAL: Dokl. AN AzerbSSR, 1956, Vol 12, Nr 11, pp 799-801

ABSTRACT: A compressed-air launcher was employed in the experiments. The tests showed that the hardness of the steel tip had an effect on the critical failure speed at the point of impact. The presence of a necked-in portion showed that the rate of plastic deformation may exceed the critical failure speed.

Reviewer's name not given

Card 1/1



Kerimov, K.A.

report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

KERIMOV, K.A.

Method for determining the shock diagram of expansions in the case of large deformations. Izv. AN Azerb. SSR Ser. fiz.-mat. i tekh. nauk no.3:23-30 '60. (MIRA 13:11)
(Shock waves)

24.4100

S/249/62/018/008/001/002
E031/E435

AUTHOR: Kerimov, K.A.

TITLE: The determination of the dynamic diagram T(e) for the case of shock loading and unloading

PERIODICAL: Doklady Akademii nauk Azerbaydzhanskoy SSR, v.18, no.8, 1962, 7-11

TEXT: In earlier work the author proposed methods for obtaining the dynamic diagram T(e) for cases of loading and unloading when the deformations in the struck bodies are accompanied by weak fractures. The present paper treats the case of strong fractures, when shock waves occur. The case is considered of a body moving at the velocity v_0 which strikes an infinitely long flexible thread at a right angle. Taking shock loading first, 5 equations are established for the six unknowns: U (particle velocity), e (deformation), t (stretch), b (velocity of propagation of the transverse wave), $\dot{c}$ (velocity of propagation of the longitudinal wave) and γ (angle of deflection of the thread). A method is described for obtaining $T = T(e)$ if the relation between v_0 and γ can be determined experimentally. Likewise, in the process of load

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relief as the body is braked, there are 5 equations for the six unknowns and, if the relation between $v_0 - v_1$ and γ_1 is known from experiment, the dynamic diagram can be obtained. Five different domains for the thread are distinguished, with the suffices 0, 1, 2, 3, 4. In the first case it is T_1 which is determined and in the second it is T_3. In both cases, the method of computation applied permits experimental verification of the obtained dependence of T on e. There are 3 figures.

ASSOCIATION: Institut matematiki i mekhaniki
(Institute of Mathematics and Mechanics)

SUBMITTED: April 23, 1962

KERIMOV, K.A.

Determining the dynamic "stress - strain" curve with an inflection point. Dokl. AN Azerb. SSR 19 no.4:11-16 '63. (MIRA 16:12)

1. Institut matematiki i mekhaniki AN AzSSR. Predstavleno akademikom AN Uzbekskoy SSR Kh.A.Rakhmatulinym.

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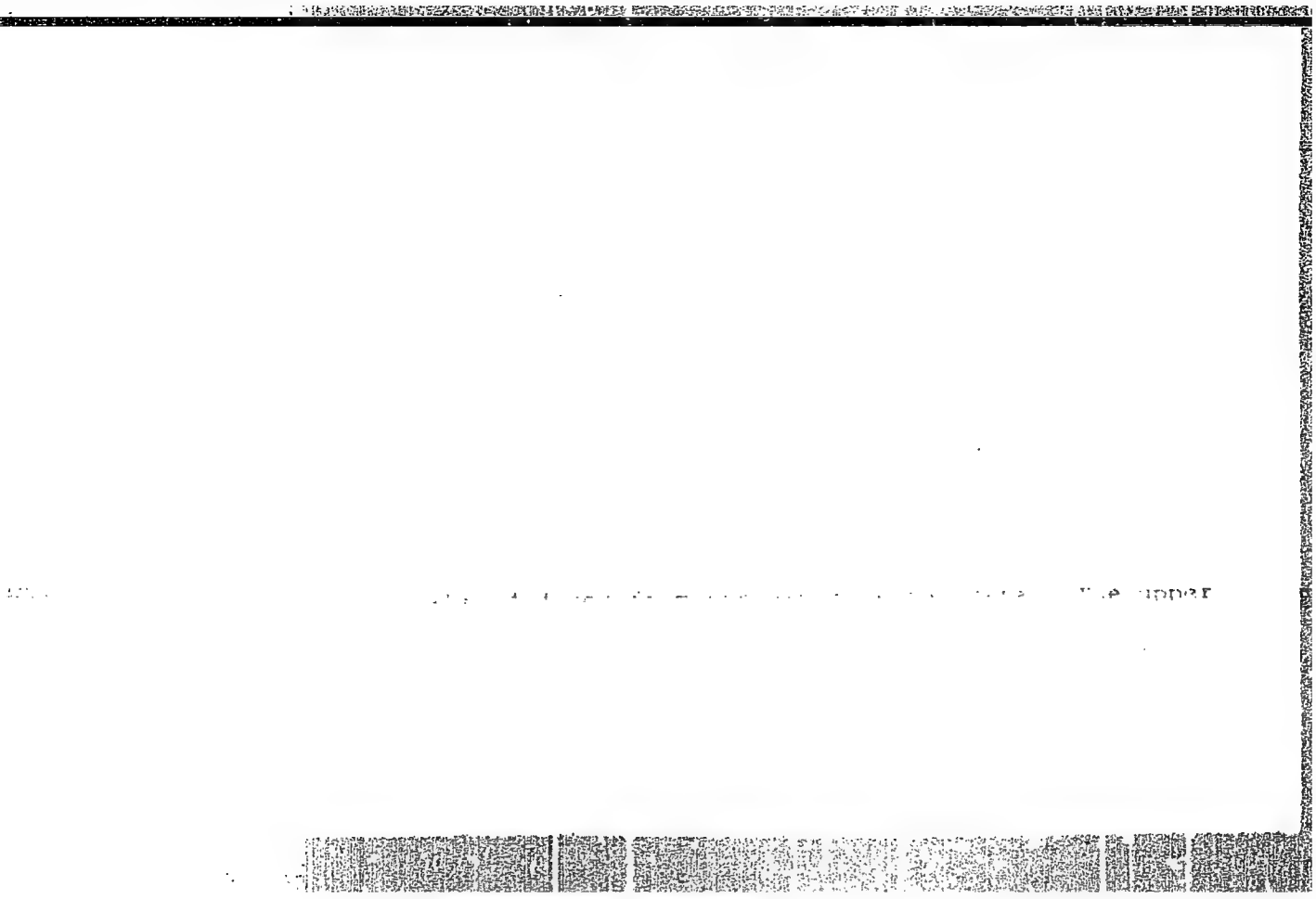

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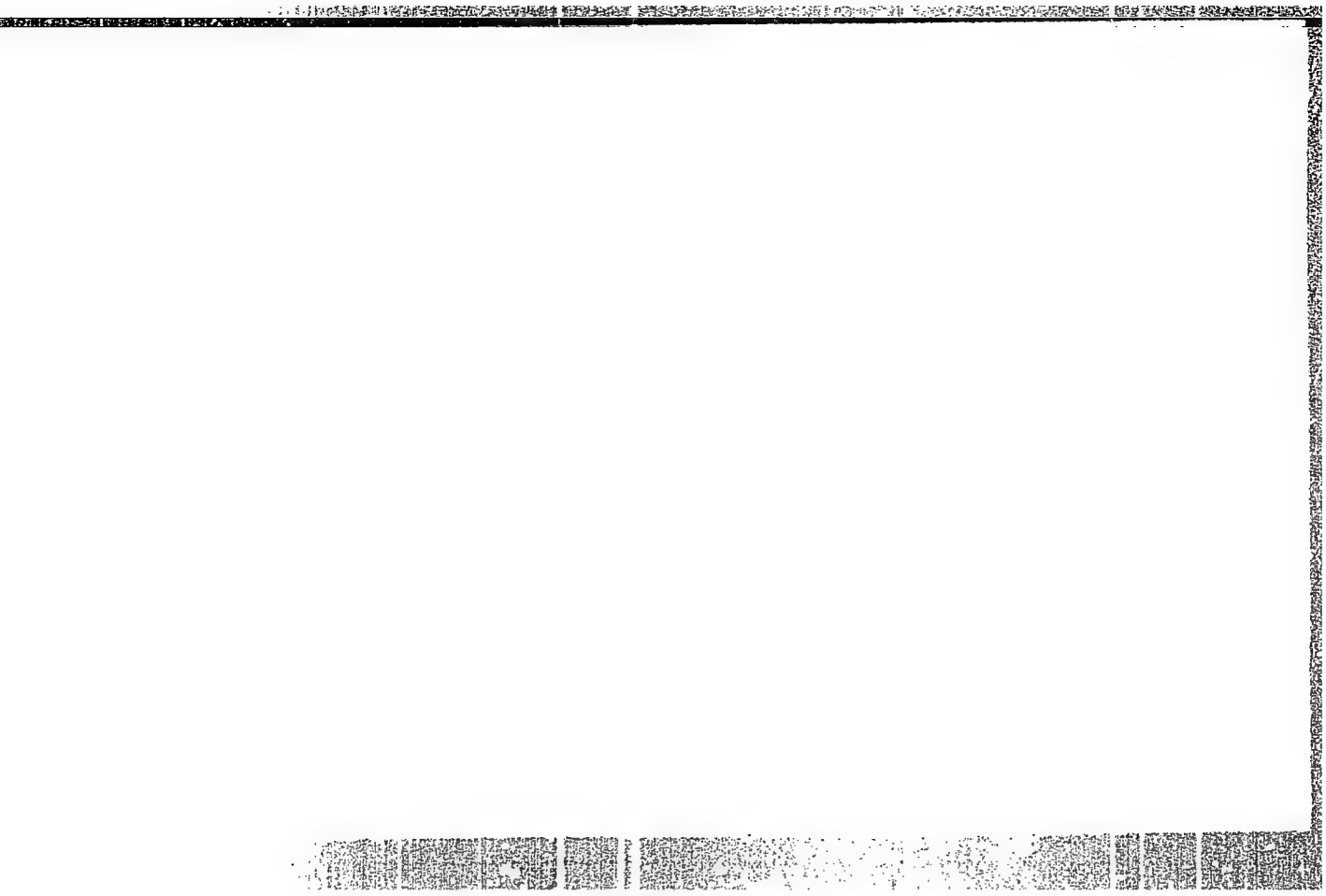

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721530004-9"

KERIMOV, K.A.

Method for determining the dynamic stress-strain relation with a bending point. Dokl. AN SSSR 162 no.5:1019-1022 Je '65. (MIRA 18:7)

1. Institut matematiki i mekhaniki AN AzerSSR. Submitted February 13, 1964.

KERIMOV, K.A.

Experimental study of the dynamic properties of materials using the method of unloading transverse impact. Dokl. AN SSSR 164 no.6:1246-1248 O '65. (MIRA 18:10)

1. Institut matematiki i mekhaniki AN AzerSSR. Submitted February 16, 1965.

L 29788-66 EWT(1) IJP(c)

ACC NR: AP6020863 SOURCE CODE: UR/0249/65/021/010/0008/0010

52
B

AUTHOR: Kerimov, K. A.

ORG: Institute of Mathematics and Mechanics (Institut matematiki i mekhaniki)

TITLE: Determination of the dynamic strain diagram with a variable striking velocity

SOURCE: AN AzerbSSR, Doklady, v. 21, no. 10, 1965, 8-10

TOPIC TAGS: motion mechanics, strain, material deformation, mathematic deduction, applied mathematics, pneumatic device, high speed camera

ABSTRACT: A system is given for a dimensional analytic solution for motion along an infinite flexible filament struck transversely at a single point. Certain experimental results are given of an investigation of the dynamic characteristics of materials when the filament is struck transversely with a varying velocity. This is accomplished by placing the head of a pneumatically accelerated slug directly in contact with the test material. Thus, the shock grows from zero to the critical value. Motion in the sample is recorded by a high-speed motion picture camera. The dynamic law for $\sigma(\varepsilon)$ derived for single variable-velocity shocks agrees with that derived from multiple shocks. This article was submitted by Academician AN AzerbSSR Z. I. Khalilovyy. Orig. art. has: 2 figures. [JPRS]

SUB CODE: 20, 12, 13, 14 / SUBM DATE: 21Aug65 / ORIG REF: 005

Card 1/1 KV

L 29788-66 EWT(m)/EWT(j) IJP(c) RM/WW

ACC NR: AP6023946 SOURCE CODE: UR/0233/65/000/006/0034/0038

AUTHOR: Kerimov, K. A.; Teymurov, F. D.

ORG: none

TITLE: Investigation of viscous-elastic-plastic properties of polymer materials subjected to transverse impact

SOURCE: AN AzerbSSR. Izv. Ser fiz-tekhn i matem n, no. 6, 1965, 34-38

TOPIC TAGS: polymer, caprone, polyvinyl chloride, solid viscosity, elastic wave, plasticity

ABSTRACT: This is a continuation of earlier dynamic tests on polymer materials (rubber, caprone, polyvinyl (Tr. Vsesoyuznogo simpoziuma po rasprostraneniyu uprugoplasticheskikh voln v sploshnykh sredakh, Baku, 1964 and elsewhere) where a model was proposed, unifying the elastic-plastic and viscous properties of polymers. This model is used to develop a procedure for the investigation of polymers with viscous-elastic-plastic properties by using transverse impact. This method is based on knowledge of the time dependence of the tension, obtained by recording tension waves reflected from the points where the sample is secured, and integrating the corresponding equations with the aid of an electronic digital computer. The individual functions involved in this model, expressing the viscous and elastic-plastic properties of the polymer, can

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ACC NR: AP6023946

also be determined from the solution. Results of an experimental determination of the mechanical properties of polyvinyl and caprone threads agree well with the calculations. Orig. art. has: 3 figures and 5 formulas.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 003

Card: 2/2

KERIMOV, K.I., red. AGAYEVA, Sh., tekhn. red.

[Transactions of the Conference of Graduate Students of the Academy of Sciences of Azerbaijan] Trudy Nauchnoi konferentsii aspirantov Akademii nauk Azerbaidzhanskoi SSR. Baku, Izd-vo Akad.nauk Azerbaidzhanskoi SSR, 1957. 402 p. (MIRA 12:6)

1. Nauchnaya konferentsiya aspirantov Akademii nauk Azerbaydzhanskoy SSR. 5th, Baku, 1955. 2. Institut arkhitektury i iskusstva (for Kerimov).
(Science--Collected works)

KERIMOV, K. B.

"Experimental and Clinical Data on the Length of Anesthetization During Rectal Surgery." Cand Med Sci, Acad Med Sci, USSR, 2 Feb 55. (VM, 21 Jan 55)

Survery of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

PROTOPOPOV, S.P., prof.; KERIMOV, K.B.

Anesthetizing properties of the benzoic ester of diethylaminoethanol. Akt. vop. obezbol. no.2:219-225 '59. (MIRA 14:5)

1. Iz Instituta khirurgii im. A.V.Vishnevskogo AMN SSSR (direktor - chlen-korrespondent AMN SSSR, zasluzhennyy deyatel' nauki RSFSR prof. A.A.Vishnevskiy).
(ETHANOL)

ABDULLAYEV, A.P.; KERIMOV, I.M.

Lithological characteristics and oil and gas potential of the sediments of a producing formation on the Pirsagat area according to the data of well electrometry. Izv. vys. ucheb. zav.; neft' i gaz 8 no.2:7-9 '65. (MIRA 18:3)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova.

AGABEYLI, Agakhan Akiasker; KERIMOV, M., red.

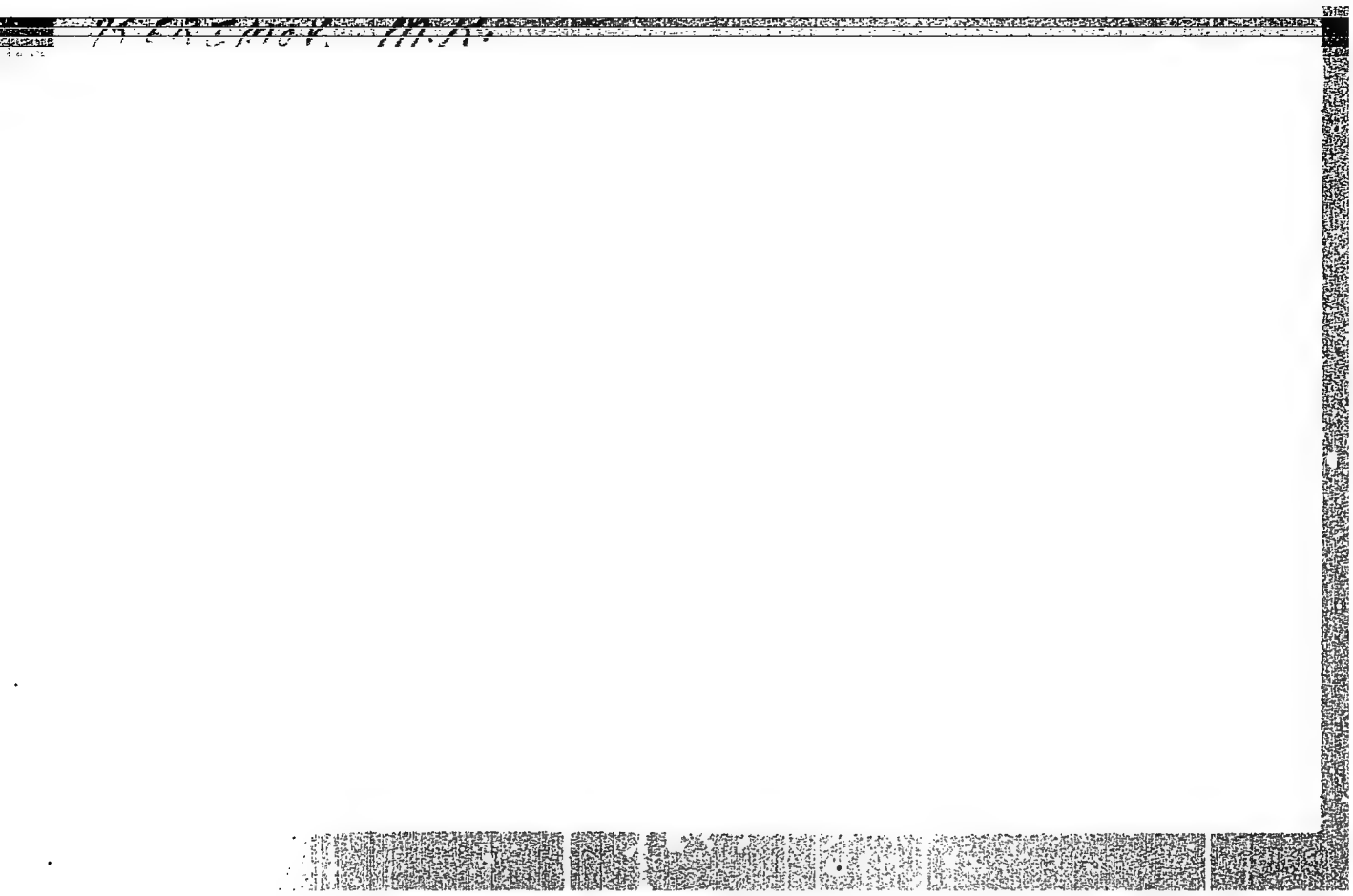
[Buffalo raising; textbook for an agricultural institute] Chamyshchylyg; kend teserrufaty institutu uchun. Baky, Azerbaichan Dovlet Tedris-pedagozhi Edabiiiaty Neshriiiaty, 1964. 178 p. [In Azerbaijani] (MIRA 17:5)

"EDEN, M. M.

"Investigations Into the Theory of Discontinuous Variational Problems With Movable Ends." Sub D, Jun 51, Mathematics Inst imeni V. A. Steklov, Acad Sci USSR

Dissertations presented for science and engineering degrees in Moscow during 1 Hl.

SO: Sum. No. 470, 7 May 55



KERIMOV, M. K.

USSR/Mathematics - Calculus of Variations 11 Aug 51

"Jacobi's Condition for Discontinuous Variational Problems With Removable Rings," M. K. Kerimov, Math Inst imeni Steklov, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXIX, No 5, pp 719-722

Previously (ibid. Vol LXXIX, No 4, 1951) enumerated the necessary conditions governing the extremum for discontinuous variational problem with removable rings, in which Jacobi's condition was formulated in terms of the sign of the 2d variation.

210T54

USSR/Mathematics - Calculus of Variations 11 Aug 51 (Contd)

In current article, attempts to formulate this condition in terms of focal points and eigenvalues. Investigations here rely essentially on the methods applied in ordinary variational problems (cf. G. Bliss, "Lectures on Calculus of Variation" /Translated into Russian, at Moscow, 1950/. Submitted by Acad M.A. Lavrent'yev 9 Jun 51.

210T54

231T67

KERIMOV, M. K.

USSR/Mathematics - Variational Problems, Approximations 11 May 52

"Sufficient Conditions of Extremum in Discontinuous Variational Problems With Movable Rings," M. K. Kerimov, Inst of Precision Mech and Computational Techniques, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol 84, No 2, pp 213-216

Gives the sufficient conditions governing the extremum for nonregular variational problems ~~with~~ discontinuous subintegral (integrand)

231T67

function and with movable rings. The necessary conditions have been given already by the author in previous articles ("Dok Ak Nauk SSSR" Vol 79, No 4 and 5, 1951). States that the case for regular discontinuous variational problem with fixed (nonremovable) ring has been given by G. Bliss (1906) and N. M. Gyunter ("Kurs Variatsionnogo Ischisleniya" (Course of Variational Computations), Moscow/Leningrad, 1941). Submitted by Acad M. A. Lavrent'yev Mar 52

231T67

KERIMOV, M.K.

Mathematical Reviews
Vol. 14 No. 9
October 1953
Analysis

Kerimov, M. K. On two-dimensional discontinuous problems of the calculus of variations. Akad. Nauk Gruzin. SSR. Trudy Mat. Inst. Razmadze 18, 209–219 (1951). (Russian. Georgian summary)

The author considers the two-dimensional non-parametric minimum problem defined by the integral

$$I(z) = \iint_G F(x, y, z, p, q)\,dx\,dy,$$

where G is the region interior to a simple closed curve S on which the values of $z(x, y)$ are prescribed. As admissible functions he takes continuous functions with first partial derivatives continuous except for discontinuities of the first kind across a smooth curve σ which cuts G into two regions. He finds conditions, analogous to the one-dimensional Weierstrass-Erdmann corner conditions, which must be satisfied by $z(x, y)$ across σ. He considers also the case of discontinuous F. *J. M. Danskin* (Washington, D. C.).

(2) Math. 2

7-13-54 LL

KERIMOV, M.K.

Bliss condition for discontinuous variational problems with variable end points. Uch.zap.AGU no.5:17-23 '58. (MIRA 12:1)
(Calculus of variations)

89721

S/020/61/136/003/004/027
C 111/ C 333

16.4900

AUTHOR: Kerimov, M. K.

TITLE: On the Theory of Discontinuous Variational Problems With Variable End-Points in the Space

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 3, pp. 542-545

TEXT: Let $(x, y_1, y_2, \ldots, y_n) \equiv (x,y)$ be a point of the Euclidean E^{n+1}; let R be a domain in E^{n+1} with the boundary S. Assume that the broken curve E_{102} lies in R, is composed of the curves E_{10} and E_{02} and is described by

$$y_i = y_i(x) \begin{cases} \bar{y}_i(x), & x^1 \quad x \quad x^0 \\ \overset{+}{y}_i(x), & x^0 \quad x \quad x^2 \end{cases} \qquad i = 1,2,\ldots,n$$

where $\bar{y}_i$ and $\overset{+}{y}_i$ are unique and possess continuous first derivatives. E_{102} is assumed to be intersected in the points 1, 0, 2 by the n-dimensional manifolds M^1, M^0, M^2, where E_{10} does not touch M^1 and M^0 in 1 and 0, E_{02} does not touch M^0 and M^2 in 0 and 2. Assume

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On the Theory of Discontinuous Variational Problems With Variable End-Points in the Space

that the M be given by the equations

$$M^1 : x=x^1(\alpha_1,\alpha_2,\ldots,\alpha_n) \equiv x^1(\alpha),\ y_i = y_i^1(\alpha_1,\alpha_2,\ldots,\alpha_n) \equiv y_i^1(\alpha),$$

$$M^0 : x=x^0(\beta_1,\beta_2,\ldots,\beta_n) \equiv x^0(\beta),\ y_i = y_i^0(\beta_1,\beta_2,\ldots,\beta_n) \equiv y_i^0(\beta),$$

$$M^2 : x=x^2(\gamma_1,\gamma_2,\ldots,\gamma_n) \equiv x^2(\gamma),\ y_i = y_i^2(\gamma_1,\gamma_2,\ldots,\gamma_n) \equiv y_i^2(\gamma),$$

where α, β, γ run through the bounded closed sets T_α, T_β, T_γ, while $x^1(\alpha)$, $y_i^1(\alpha)$, $x^0(\beta)$, $y_i^0(\beta)$, $x^2(\gamma)$, $y_i^2(\gamma) \in C^{(3)}$ for $\alpha \in T_\alpha$, $\beta \in T_\beta$, $\gamma \in T_\gamma$. $\alpha_h=0$, $\beta_h=0$, $\gamma_h=0$ $(h=1,2,\ldots,n)$ correspond to the points 1,0,2 of E_{102}. The M^i do not intersect themselves and each other, and are assumed to be regular for the α, β, γ - values in question; let M^1 lie on the left of M^0, and M^2 on the right of M^0. Let R^-+S^- and R^++S^+ be the left and the right subdomain into which

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On the Theory of Discontinuous Variational Problems With Variable End-Points in the Space

R+S is divided by M^0, where S^- and S^+ have a common part along M^0.

The author considers the function

$$F(x,y,p) \quad F(x,y_1,y_2,..,y_n,p_1,p_2,..,p_n) \begin{cases} F^1(x,y_1,y_2,..,y_n,p_1,p_2,..,p_n), \\ F^2(x,y_1,y_2,..,y_n,p_1,p_2,..,p_n), \end{cases}$$

$F^1 \in C^{(4)}$ for $(x,y) \in R^- + S^-$, $-\infty < p < +\infty$;
$F^2 \in C^{(4)}$ for $(x,y) \in R^+ + S^+$, $-\infty < p < +\infty$.

Assume that G is the set of the functions $y_i(x)$ with the properties: a.) $y_i(x)$ are continuous; b.) the curves C_{102} described by these functions lie in R and consist of a finite number of regular arcs; c.) every C_{102} intersects the M^1, M^0, M^2 simply, where it has a joint on M^0.

Problem: Let $E_{102} \in G$ with joint 0 be given. Which conditions E_{102}

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must satisfy in order that the functional

$$(1) \qquad J(y) = \int_{x^1(\alpha)}^{x^0(\beta)} F^1(x,y,y')\,dx + \int_{x^0(\beta)}^{x^2(\gamma)} F^2(x,y,y')\,dx$$

calculated along E_{102} has a relative minimum in the class of the admitted functions G.

Necessary condition I (Euler): In order that $E_{102} \in G$ gives a minimum to the functional J it is necessary that the arcs E_{10} and E_{02} satisfy the Euler equations in integral form.

Necessary condition II (Weierstraß):

$$\mathcal{E}^k(x,y,y',Y') \gtrless 0$$

(k=1 corresponds to E_{10} and k = 2 to the arc E_{02}).

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Necessary condition III (Legendre):

$$F^k_{y'_i y'_j}(x,y,y')\,\pi_i\,\pi_j \geqq 0 \quad (i,j = 1,2,\ldots, n)\ .$$

The $E_{102} \in G$ with E_{10}, $E_{20} \in C^{(2)}$, along which the developed Euler equations are satisfied, while the discontinuity condition is satisfied in O, is called broken extremal of J. If, moreover,

$$(2) \quad \left| F^k_{y'_i y'_j} \right| \neq 0 \quad (i,j = 1,2,\ldots,n)$$

is satisfied, then E_{102} is called nonsingular broken extremal. The E_{102} which gives a minimum to J is a broken extremal.

Theorem 1: If 1.) in the point 1 of M^1, where it intersects the nonsingular broken extremal E_{102},

$$(6) \quad (F^1 - \overline{y}_{ix} F^1_{y'_i})\,dx^1 + F^1_{y_i}\,dy^1_i = 0$$

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On the Theory of Discontinuous Variational Problems With Variable End-Points in the Space

is satisfied; 2.) E_{102} does not touch M^1 and M^0 in 1 and 0, then there exists an n-parameter family of broken extremals

$$(9) \quad \equiv y_i(x,\alpha) \quad \begin{matrix} y_i = y_i(x,\alpha_1,\alpha_2,\ldots,\alpha_n) \\ \bar{y}_i(x,\alpha), \quad x^1(\alpha) \leqq x \leqq x^0(\beta), \\ \overset{+}{y}_i(x,\alpha), \quad x^0(\rho) \leqq x \leqq x^2(\gamma) \end{matrix} \quad (i = 1,2,\ldots,n)$$

which is transversely intersected by M^1 in the neighborhood of point 1 and has the following properties: a.) (9) contains E_{102} for $\alpha=0$; b.) the functions $\bar{y}_i(x,\alpha)$, $\overset{+}{y}_i(x,\alpha)$ and their first and second derivatives with respect to x have continuous partial derivatives up to the second order in the points (x,α) which lie in a certain neighborhood of the corresponding points for E_{10} and E_{02}; c.) the determinant

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$$(10)\ \Delta(x,\alpha) \sim \begin{cases} \bar{\Delta}(x,\alpha) = \left| \bar{y}_{i\alpha_k}(x,\alpha) \right. & \text{for } E_{10} \\ \overset{+}{\Delta}(x,\alpha) = \left| \overset{+}{y}_{i\alpha_k}(x,\alpha) \right. & \text{for } E_{02} \end{cases} \qquad k,i = 1,2,\ldots,n)$$

is $\equiv 0$ along E_{102}.

Definition: Points of the broken extremal E_{102} which correspond to the zeros of $\Delta(x,\alpha)$ are called focal points of M^1 on E_{102} (analogously for M^2).

Theorem 2: Point 3 is assumed to be focal point of M^1 on the non-singular broken extremal E_{102}; let the derivative of $\Delta(x,\alpha)$ with respect to x in 3 be $\neq 0$. Then there exists a one-parameter family of broken extremals

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$$(11)\quad y_i - y_i\left[x, \alpha(t)\right] \equiv y(x,t) \begin{cases} \bar{y}_i(x,t), & x^1(t) \leqq x \leqq x^0(t) \\ \overset{+}{y}_i(x,t), & x^0(s) \leqq x \leqq x^2(t) \end{cases}$$

which is transverse to M^1, contains E_{102} for $t = 0$, and possesses an envelope D which touches E_{102} in 3. The functions y_i, y_{ix} and $x(t)$ have continuous derivatives in the neighborhood of the values x,t which correspond to the arcs E_{10} and E_{02}. Necessary conition IV (Jacobi): In order that the nonsingular extremal E_{102} with a single joint 0 gives a minimum to the functional J, it is necessary that there are no focal points of M^1 and M^2 between the points 1 and 2 on E 102. There are 5 references: 4 Soviet and 1 American.

ASSOCIATION: Vychislitel'nyy tsentr Akademii nauk SSSR (Computer Center of the Academy of Sciences USSR)

PRESENTED: July 12, 1960, by A. A. Dorodnitsyn, Academician
SUBMITTED: July 7, 1960

Card 8/8

16.6800

27873
S/020/61/140/001/006/024
C111/C222

AUTHOR: Kerimov, M.K.

TITLE: On the theory of the second variation for discontinuous variational problems in space

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 1, 1961, 41-44

TEXT: The author joins his earlier publication (Ref. 1, DAN 136, no. 3, 1961) and uses the notations of it. He investigates the second variation for discontinuous variational problems with movable ends in the multi-dimensional space (Ref. 1). It is assumed (as in(Ref. 1)) that the integrand of the integral J the minimum of which is sought has only one discontinuity surface.
Let E_{102} be the broken extremal which gives a minimum to J. For the calculation of the second variation of J the author generalizes a method of M. Morse (Ref. 3 : The Calculus of Variations in the Large, Am.Math. Soc. Colloquium Publications, 18, N.Y., 1934). Let $\alpha_h(a)$, $\beta_h(a)$, $\gamma_h(a)$ $(h = 1,2,\ldots,n)$ be functions belonging to the class $C^{(2)}$ for small

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a . By a substitution into the primary conditions for the ends (Ref.1) and differentiation with respect to a , for a = 0 one finds the secondary conditions (A) :

$$\eta_i^1 = \eta_i(x^1) = c_{ih}^1 \tau_h^1, \quad \eta_i^2 = \eta_i(x^2) = c_{ih}^2 \tau_h^2 ,$$

$$\eta_i^{o-} = \eta_i^{o-}(x^o) = c_{ih}^{o-} \tau_h^o, \quad \eta_i^{o+} = \eta_i^{o+}(x^o) = c_{ih}^{o+} \tau_h^o \quad (h,i=1,2,\ldots,n) \qquad (A)$$

where

$$\eta_i(x) = y_a(x,0), \quad \tau_h^1 = \alpha_h'(0), \quad \tau_h^2 = \gamma_h'(0), \quad \tau_h^o = \beta_h'(0) ,$$

$$c_{ih}^k(0) = y_{ih}^k(0) - y_{ix}(x^k) x_h^k(0) ,$$

$$c_{ih}^{o-} = y_{ih}^o(0) - y_{ix}^-(x^o) x_h^o(0) , \quad c_{ih}^{o+} = y_{ih}^o(0) - y_{ix}^+(x^o) x_h^o(0)$$

$$(i,h = 1,2,\ldots n \; ; \; k = 1 \text{ or } 2).$$

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On the theory of the second variation ...

According to (Ref. 1) the admissible curves

$$y_i = y_i(x,a) \begin{cases} y_i^-(x,a), & x^1(a) \leq x \leq x^0(a) \\ y_i^+(x,a), & x_0(a) \leq x \leq x^2(a) \end{cases} \quad (1)$$

can be constructed which contain the given E_{102}. The $\eta_i(x)$, τ_h^1, τ_h^0, τ_h^2 are denoted as variations of the family (1) along E_{102}. The expression

$$J''(0) = J_2(\eta,\tau) = b_{hl}^1\tau_h^1\tau_l^1 + (b_{hl}^{0-} + b_{hl}^{0+})\tau_h^0\tau_l^0 + b_{hl}^2\tau_h^2\tau_l^2 + \int_{x^1}^{x^0} 2\omega^1(x,\eta,\eta')dx + \int_{x^0}^{x^2} 2\omega^2(x,\eta,\eta')dx \quad (2)$$

calculated with consideration of the primary conditions of transversality and discontinuity, where b_{hl}^k are certain expressions depending on F^1, F^2, is denoted as the second variation of J along E_{102}.

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Admissible variations $\eta_i(x), \tau_h^1, \tau_h^o, \tau_h^2$ $(x^1 \leq x \leq x^2)$ are such ones where the τ are constants and $\eta_i(x)$ on $x^1 \leq x \leq x^2$ everywhere belongs to the class $D^{(1)}$ with the exception of the point $x = x^o$ where it appears a discontinuity of first kind where it holds

$$\eta_i^{o-} = c_{ih}^{o-}\tau_h^o , \quad \eta_i^{o+} = c_{ih}^{o+}\tau_h^o . \qquad (3)$$

Let the broken extremal E_{102} which in the points 1,2 is intersected by the manifolds M^1, M^2, where the primary conditions of transversality are satisfied, satisfy the condition IV if for every admissible variational set which satisfies (A), $J_2(\eta,\tau)$ is not negative along E_{102}.

Theorem 1 : In order that E_{102} gives a minimum to the functional J it is necessary that it satisfies IV.

The secondary variational problem is defined analogous to the primary variational problem (Ref. 1) ; the $\eta_i(x)$ of the class $D^{(1)}$ with dis-

continuities of first kind in $x = x^0$ serve as admissible functions ; linear manifolds, N^1, N^0, N^2 with the equations (A) serve as manifolds M^1, M^0 and M^2. The $\eta_i(x)$, τ_h^1 , τ_h^0 , τ_h^2 which let $J_2(\eta, \tau)$ become a minimum, satisfy

$$J_i(\eta) = \frac{d}{dx}\omega_{\eta_i}^1 - \omega_{\eta_i}^1 = 0, \quad x^1 \leq x \leq x^0 , \tag{4}$$

$$\frac{d}{dx}\omega_{\eta_i}^2 - \omega_{\eta_i}^2 = 0, \quad x^0 \leq x \leq x^2 \tag{5}$$

$$(i = 1,2,\ldots,n)$$

and the boundary conditions

$$C_{ih}^1 \eta_i^1 (x^1) = b_{hl}^1 \tau_l^1, \quad C_{ih}^2 \eta_i^2 (x^2) = - b_{hl}^2 \tau_l^2, \tag{6}$$

$$C_{ih}^{0-} \eta_i^1 (x^0) - C_{ih}^{0+} \eta_i^2 (x^0) = - (b_{hl}^{0-} + b_{hl}^{0+}) \tau_l^0 \quad (i, l, h = 1, 2, \ldots, n), \tag{7}$$

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On the theory of the second variation ...

with the notations

$$\zeta_i^1(x) = \omega_{\eta_i}^1[x, \eta(x), \eta'(x)] , \quad \zeta_i^2(x) = \omega_{\eta_i}^2[x, \eta(x), \eta'(x)] \qquad (8)$$

Theorem 2 : For every extremal $\eta_i^-(x)$, τ_h^1 $(x^1 \leq x \leq x^0)$ of (4) which satisfies the first conditions (A) and (6) and which intersects N^0 there exists a unique extremal $\eta_i^+(x)$, τ_h^0 $(x^0 \leq x \leq x^2)$ of (5) which together with $\eta_i^-(x)$ satisfies the conditions (3) and (7).

The author introduces conic variables η_i, ζ_i^k with the aid of

$$\zeta_i^k = \omega_{\eta_i}^k(x, \eta, \eta') , \qquad (9)$$

and the system (4), (5) is considered in these variables with the initial conditions

$$\eta_i(x^1) = c_{il}^1 \tau_l^1 , \quad \zeta_i^1(x^1) c_{ih}^1 = b_{hl}^1 \tau_l^1 \quad (i,h,l,=1,2,..,n) \qquad (13)$$

linearly independent solutions of this system are investigated.

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The point corresponding to the value $x = x^3 (x^3 \neq x^1 , x^3 \neq x^0)$ of a non-singular broken extremal E_{102} which in the point 1 is transversal to M^1 is called a focal point of M^1 if (4)-(5)-(13) has a discontinuous solution $u_i(x)$ so that $u_i(x^3) = 0$, but not all u_i vanish identically on $x^1 < x < x^3$. A focal point of M^2 is defined analogously. The condition of Jacobi (condition IV) of (Ref. 1) is improved as follows : In order that a non-singular broken extremal E_{102} with the single corner point 0 being transversal to M_1 and M_2 gives a minimum to the functional J it is necessary that between the points 1 and 2 on E_{102} there exist no focal points of M^1 and M^2. There is 1 Soviet-bloc and 2 non-Soviet-bloc references. The references to the two English-language publications read as follows : N. Cole, Am.J.Math. , 62, no. 2, (1940) ; M.Morse, The Calculus of Variations in the Large, Am.Math.Soc.Colloquium Publications, 18, N.Y., 1934.

Card 7/8

27873
S/020/61/140/001/006/024
On the theory of the second variation ... C111/C222

ASSOCIATION: Vychislitel'nyy tsentr Akademii nauk SSSR (Computing Center of the Academy of Sciences USSR)

PRESENTED: March 6, 1961, by A.A. Dorodnitsyn, Academician

SUBMITTED: March 3, 1961

Card 8/8

KERIMOV, M.K.

"Numerical methods for high speed computers". Reviewed by M. K. Kerimov. Zhur. vych. mat. i mat. fiz. 1 no.1:183-184 Ja-F '61. (MIRA 14:8)

(Electronic calculating machines)

KERIMOV, M.K.

"Numerical analysis" by Z.Kopal. Reviewed by M.K.Kerimov. Zhur. - vych.mat.i mat.fiz. 2 no.3:509-510 My-Je '62. (MIRA 15:7)
(Numerical calculations) (Kopal, Z.)

KERIMOV, M.K.

"Transcendental functions" by A.Kratzer, Walter Franz. Reviewed by M.K.Karimov. Zhur.vych.mat.i mat.fiz. 2 no.4:727 Jl-Ag '62. (MIRA 15:8)

(Functions, Transcendental) (Kratzer, A.) (Franz, Walter)

KERIMOV, M. K.

"Guide to tables in mathematical statistics" by J. A. Greenwood, H. O. Hartley". Reviewed by M. K. Kerimov. Zhur. vych. mat. i mat. fiz. 2 no.5:959 S-O '62. (MIRA 16:1)

(Mathematical statistics—Tables, etc.)

KERIMOV, M.K.

Selected works by L.Tonelli. Reviewed by M.K.Kerimov. Zhur. vych.mat.i mat.fiz. 3 no.2:413-414 Mr-Ap '63. (MIRA 16:4)
(Mathematics) (Tonelli,L.)

KERIMOV, M.K.

"Discrete variable methods in ordinary differential equations" by P.Henrici. Reviewed by M.K.Kerimov. Zhur.vych.mat.i mat.fiz. 3 no.2:414-415 Mr-Ap '63. (MIRA 16:4)
(Differential equations) (Henrici, P.)

KERIMOV, M. K.; KOL'CHUZHKIN, A. M.

"The 3-j and 6-j symbols" by M. Rotenberg and others. Reviewed by M. K. Kerimov, A. M. Kol'chuzhkin. Zhur. vych. mat. i mat. fiz. 2 no.5:959-960 S-O '62. (MIRA 16:1)

(Angular momentum(Nuclear physics))
(Rotenberg, M.)

KERIMOV, M.K.

"An index of mathematical tablets" by A. Fletcher and others. Reviewed by M.K. Korimov. Zhur. vych. mat i mat fiz. 3 no.6:1141-1142 N-D '63. (MIRA 17:1)

Bibliography. Ibid.:1144-1147

KERIMOV, M.K.

"Construction of geodetic fields in the large for variational problems with multiple integrals" by R. Klotzler. Reviewed by M.K. Kerimov. Zhur. vych. mat. i mat. fiz. 3 no.4:795 Jl-Ag '63.

"Tables of elliptic integrals" by V.M. Beliakov, R.I. Kravtsova, M.G. Rappoport. Reviewed by M.K. Kerimov. 795-796

Bibliography. 797-800 (MIRA 16:7)

KERIMOV, M.K.

"An introduction to the calculus of variations" by L.A.Para.
Reviewed by M.K.Kerimov. Zhur. vych. mat. i mat.fiz. 4 no.1:
206-207 Ja-F '64. (MIRA 17:6)

KERIMOV, M.K.

"Russian reader in pure and applied mathematics." by P.H. Nidditah. Reviewed by M.K. Kerimov. Zhur. vych. mat. i mat. fiz. 4 no.5:980 S-O '64. (MIRA 17:12)

KERIMOV, N.

Study of the rate and degree of rachitic changes in young children under conditions of Apsheron (Buzovny). Sbor. trud. Azerb. nauch.-issl. inst. kur. i fiz. metod. lech. no.9: 202-207 '63. (MIRA 18:8)

ACC NR: AP7003516 (A,N) SOURCE CODE: UR/0113/67/000/001/0008/0011

AUTHORS: Karimov, N. A. (Candidate of technical sciences); Mekhtiyev, R. I. (Candidate of technical sciences)

ORG: Azerbaidzhan Polytechnic Institute (Azerbaydzhanskiy politekhnicheskiy institut)

TITLE: An engine with fuel injection and forechamber jet ignition

SOURCE: Avtomobil'naya promyshlennost', no. 1, 1967, 8-11

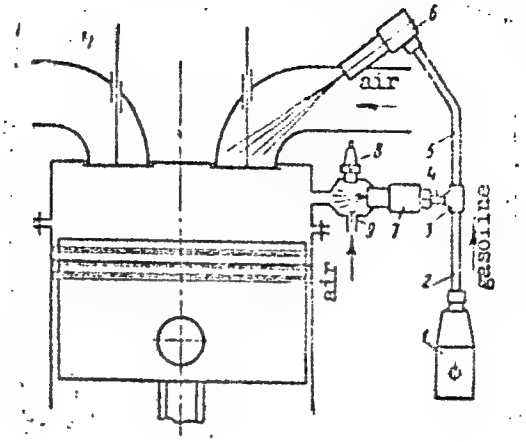
TOPIC TAGS: internal combustion engine, engine combustion system, engine fuel system, engine ignition system, engine performance characteristic, engine test facility, engine, injector, fuel pump, test stand, gasoline, fuel injection, fuel ignition / 1 MCh 10.5-13 engine, FSh 1.5 x 15 degree injector, A-72 gasoline, TN8.5 x 10 fuel pump, KO 1608 test stand, Volga M-21 engine

ABSTRACT: A system of fuel injection and forechamber jet ignition of a gasoline engine was studied. Figure 1 shows the injection-measuring piston pump. The main injector (6) is of a closed type while the secondary (forechamber) injector (7) is of the open type. The spark plug (8) ignites the forechamber, and the blow-through check valve (9) allows fresh air to sweep the gases out of the forechamber. The fuel consumption of the main injector (6) varies widely over the engine operating range, while the consumption of injector (7) hardly changes. Optimum conditions under full power call for a fuel consumption of 15—20% of the total by the forechamber injector (7). A 1 MCh 10.5/13 engine

Card 1/3 UDC: 621.43—43.043.

ACC NR: AP7003516

Fig. 1. Diagram of an engine fuel supply with gasoline injection and forechamber ignition



had one cylinder changed to this type fuel system so that it could be compared with a standard carburetor system in the other cylinders. A-72 gasoline was injected through a FSh 1.5 x 15° injector. The engine compression was 6.1, and the engine operation was monitored by an oscillograph, amplifier, and piezoquartz detector. Tests were run on a KO-1608 stand, using fuel pump TN8.5 x 10. The excess air coefficient ranged within

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ACC NR: AP7007516

acceptable values. Tests at 1000, 1200, and 1500 rpm showed smoother operation with less sensitivity to the maximization of the engine parameters for the injection system. Fuel consumption for the injector was 230—235 g/hp while the carburetor system called for 255—260 g/hr. The injector also produced 15—20% more power. The system shows promise and will be tested further on the Volga M-21 automobile engine. Orig. art. has: 6 figures.

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 002

Card 3/3

KERIMOV, M. A.

"A Fuel Mixer for Obtaining Optimum Regulation of the Operation of a Generator-Gas Motor Vehicle or Tractor Engine With External (Outside the Cylinder) Mixture Formation." Cand Tech Sci, Azerbaydzhan Industrial Inst imeni Azizbekov, 6 Dec 54. (BR, 18 Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

ACC NR: AP6021815 (A) SOURCE CODE: UR/0413/66/000/012/0108/0109

INVENTOR: Kerimov, N. A.; Mekhtiyev, R. I.

ORG: none

TITLE: Flame-ignition and light-fuel-injection system for internal-combustion engines. Class 46, No. 182956

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 108-109

TOPIC TAGS: engine ignition system, fuel injection, internal combustion engine

ABSTRACT: An Author Certificate has been issued for a flame-ignition and light-fuel-injection system for internal-combustion engines, consisting of a fuel pump for the

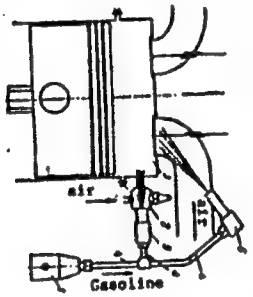

Fig. 1. Flame ignition and light-fuel-injection system

1 - Pump; 2 - precombustion chamber; 3 - cylinder; 4 - intake manifold; 5 - precombustion chamber injector; 6 - cylinder injector.

Card 1/2 UDC: 621.434.43.043.1

ACC NR: AP6021815

parallel feed of fuel to the injectors in the precombustion chamber and cylinder (in the intake manifold) (see Fig. 1). For the purpose of optimum carburetion under changing conditions, an open injector is used in the precombustion chamber, thus assuring constant fuel delivery under all operating conditions. A closed injector is used in the cylinder (in the intake manifold) to assure variable fuel feed relative to engine operating conditions. Orig. art. has: 1 figure. [WS]

SUB CODE: 21/ SUBM DATE: 02Apr65/ ATD PRESS: 5049

Card 2/2

YUDOVICH, V.G.; KHLEBORODOV, A.D.; SOLONEVICH, Ye.A., VEYTS, V.L.; PANOV,F.S.; BELYAYEV, A.N.; ALAD'IN, O.I., OSIPOV, V.F.; VOROB'YEV, A.I.; PROKOF'YEV, Yu.V.; SOLOV'YEV, Yu.A.; KUZ'MIN, A.V.; ZHIDONIS, V.Yu.; ZOLIN, A.V.; YATSUK, Ye.F. DOBROSLAVSKIY, V.L.; TROFIMOV, Ye.N.; DRYAGIN, Ye.R.; KOROLEV, V.F.; KERIMOV, N.B.; KRAVCHENKO, A.S.; RIVLIN, V.A.; GURCHENKO, A.P.; KRUGLIKOV, T.P.; CHERNYAKOV, F.A.; ANSHITOV, N.K.

Authors' certificates and patents. Mashinostroenie no.1:101-103 Ja-F '65. (MIRA 18:4)

KERIMOV, N.K.

Physicogeographical zoning of the Azerbaijan S.S.R. Uch.zap.AGU no.5:91-101 '58. (MIRA 12:1)
(Azerbaijan--Physical geography)

KERIMOV, N.K.

Experimental investigation of the change in the velocity and the hydrodynamic pressure in a well when hoisting a drilling tool. Izv. vys. ucheb. zav.; neft' i gaz 7 no.7:64 '64.
(MIRA 17:9)

1. "AzNIIburneft'".

S/058/61/000/012/034/083
A058/A101

AUTHOR: Kerimov, O. K.

TITLE: Effect of impurities on spectral line intensity

PERIODICAL: Referativnyy zhurnal, Fizika, no. 12, 1961, 249, abstract 12G195 ("Uch. zap. Azerb. un-t. Fiz.-matem. i khim. ser.", 1959, no. 6, 25-35, Azerb., Russian summary)

TEXT: Incident to spectral analysis of galenite of the Mekhmanskiy deposit a weak trace of the germanium line was detected. To investigate the effect of individual factors on the Ge line intensity, S, Se and Te were chosen as impurities. Determination of Ge line intensity with and without impurities gives reason to infer the following: 1. if impurity excitation energy is higher than that of the investigated element, the latter's line intensity wanes; 2. its line intensity also decreases in the event that impurity volatility is the greater, self-consistency being observed even for small concentrations.

[Abstracter's note: Complete translation]

Card 1/1

s/058/62/000/005/041/119
A001/A101

AUTHORS: Kerimov, O. K., Kadymova, F. A.

TITLE: Effect of gas composition on spectral line intensities at thermal excitation

PERIODICAL: Referativnyy zhurnal, Fizika, no. 5, 1962, 16, abstract 5V105 ("Uch. zap. Azerb. un-t. Fiz.-matem. i khim. ser.", 1960, no. 6, 33-38)

TEXT: The authors investigated the effect of admixtures on intensities of gas spectral lines. Sn, Sb and Ga were taken as elements being studied, and carbon, galenite and sphalerite as bases. The test substance was excited by an arc produced by a ДГ -2 (DG-2) a-c generator with addition of elements possessing a low ionization potential, such as NaCl, KCl, RuCl and $KClO_3$.

Ye. Pshenichnov

[Abstracter's note: Complete translation]

Card 1/1

KERIMOV, O.K.; KADYMOVA, F.A.; MAMEDOV, A.B.

Effect of the composition of a gas and the temperature gradient on the spectral line intensity. Uch. zap. AGU. Ser. fiz.-mat. i khim. nauk no.5:117-128 '61. (MIRA 16:6)

(Gases--Spectra)

KERIMOV, P. A.

KERIMOV, P. A.: "An attempt to improve hybrid sheep in the azid zone of the steppes of the Transvolgo and Ural region toward producing fine-wooled varieties." All-Union Sci Res Inst of Animal Husbandry. Makhachkala, 1956. (Dissertion For the Degree of Candidate in Agricultural Sciences.)

Knizhnaya letopis', No. 39, 1956. Moscow.

KERIMOV, R.G.

Movement of a viscoplastic fluid through annular space. Izv. vys. ucheb. zav.; neft' i gaz 8 no.3:33-36 '65. (MIRA 18:5)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova.

YAKUBOV, A.A.; KERIMOV, K.M.

Method for determining the absolute permeability of petroleum-bearing rocks from their specific resistance. Izv.vys. ucheb. zav.; neft' i gaz 6 no.11:83-5 '63. (MIR, 17:9)

1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova.

YAKUBOV, A.A.; KERIMOV, R.M.

Method for determining the permeability of oil-bearing rocks from data on the specific resistance. Izv. vys. uchet. zav.; neft' i gaz 7 no.3:11-14 '64. (MIRA 17:6)

1. Azerbaydzhanskiy institut nefti i khimii imeni Azizbekova.

SUKOMEL, A.S., kand. tekhn. nauk; TSVETKOV, F.F., inzh.; KERIMOV, R.V., inzh.

Local heat transfer from a heated pipe wall to a turbulent gas flow carrying suspended graphite particles. Trudy MEI no.63:17-26 '65. (MIRA 18:12)

KERIMOV, R.Yu.

Polariscopic method for studying the stresses in a circular disc with grooves. Uch. zap. AGU. Ser. fiz.-mat. i khim. nauk no.5: 43-49 '61. (MIRA 16:6)
(Elastic plates and shells) (Strains and stresses)

L 20782-66 EWT(d)/EWT(m)/EWP(w) IJP(c) EM

ACC NR: AP6005608 SOURCE CODE: UR/0233/65/000/003/0068/0073

AUTHORS: Kerimov, R. Yu.; Khoroshun, L. P.

37
B

ORG: none

TITLE: The elastoplastic stressed state of a plate with an opening

SOURCE: AN AzerbSSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 3, 1965, 68-73

TOPIC TAGS: flat plate, stress measurement, stress analysis, elastic stress, plastic strength, plastic deformation, elastic deformation

ABSTRACT: The stressed state and plastic zones around an opening in a plate are studied for materials with hardening. The work is based on the theory of small elasto-plastic deformations (A. A. Il'yushin. Plastichnost', Gostekhizdat, 1948). The stress deformation condition is expressed as

$$\sigma_{\kappa\kappa} = 3K\varepsilon_{\kappa\kappa},$$

$$\sigma'_{jk} = 2\mu[1 - \omega(\varepsilon_i)]\,\varepsilon'_{jk} \quad (j, \kappa = 1, 2, 3)$$

or

$$\varepsilon_{\kappa\kappa} = \frac{1}{3K}\sigma_{\kappa\kappa},$$

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$$\varepsilon'_{jk} = \frac{1}{2\mu}[1 + \varphi(\sigma_i)]\,\sigma'_{jk} \quad (j, k = 1, 2, 3),$$

where σ_{kk}, ε_{kk} are the mean stress and volume deformation; σ_{jk}, ε_{jk} are deviators of stress and deformation tensors; σ_i, ε_i are the intensities of tangential stresses and shear deformations; $\omega(\varepsilon_i)$, $\phi(\sigma_i)$ are the Il'yushin function and an analogous function for the second equations given above; K, μ are elastic constants. The planar stressed state for the second system is given by

$$\varepsilon_{jk} = \frac{1}{2\mu}\sigma_{jk} + \frac{1}{3}\left(\frac{1}{3K} - \frac{1}{2\mu}\right)\sigma_{ll}\delta_{jk} + \frac{\varphi(\sigma_i)}{2\mu}\left(\sigma_{jk} - \frac{1}{3}\delta_{ll}\delta_{jk}\right),$$

where

$$\sigma_i = \frac{\sqrt{2}}{3}\sqrt{(\sigma_{11} + \sigma_{22})^2 + 3(\sigma_{12} - \sigma_{11}\sigma_{22})}.$$

The stress function F is defined as

$$\Delta\Delta F = q,$$

where

$$q = -\frac{3K}{2(3K+\mu)}\left[2\varphi\Delta\Delta F + \frac{\partial^2\varphi}{\partial x^2}\cdot\frac{\partial^2 F}{\partial x^2} + 2\frac{\partial^2\varphi}{\partial x\partial y}\cdot\frac{\partial^2 F}{\partial x\partial y} + \right.$$

$$\left. + \frac{\partial^2\varphi}{\partial y^2}\cdot\frac{\partial^2 F}{\partial y^2} - \frac{1}{3}\Delta\varphi\cdot\Delta F + \frac{4}{3}\left(\frac{\partial\varphi}{\partial x}\frac{\partial\Delta F}{\partial x} + \frac{\partial\varphi}{\partial y}\cdot\frac{\partial\Delta F}{\partial y}\right)\right].$$

L 20782-66

ACC NR: AP6005608

This system may be used for a solution by successive approximations and is particularly suited to numerical methods on a digital computer. The case of the biaxial stressed state of a plate with a circular opening is developed. The stress function F is transformed to ordinary differential equation form for subsequent application of numerical methods. The method of Galerkin is used in converting F into a system of two ordinary equations. Boundary conditions are stated. The solution of concrete problems is saved for subsequent publications. Orig. art. has: 15 equations and 2 figures.

SUB CODE: 20/ SUBM DATE: 10Aug64/ ORIG REF: 010

Card 3/3 vmb

L 27185-66 EWT(d)/EWP(w) EM

ACC NR: AP6016882 SOURCE CODE: UR/0198/65/001/009/0128/0130

AUTHOR: Kerimov, R. Yu. (Kiev)

ORG: Kiev State University (Kiyevskiy gosudarstvennyy universitet)

TITLE: Development of plastic regions near a circular opening during uniaxial stretching of a plate

SOURCE: Prikladnaya mekhanika, v. 1, no. 9, 1965, 128-130

TOPIC TAGS: nonlinear equation, material deformation, ordinary differential equation, digital computer

ABSTRACT: The author proposes a method for calculating the development of plastic zones near a circular opening in a reinforced plate for the case of uniaxial tension. A nonlinear equation is derived on the basis of the expression for the stress as a function of deformation for the case of the plane stressed state. The Galerkin method is then used to reduce this nonlinear equation to a system of two ordinary differential equations. These equations were solved on a digital computer using the method of successive approximations. A specific example of application of the method is given. Orig. art. has: 3 figures, 8 formulas, and 1 table. [JPRS]

SUB CODE: 12, 20 / SUBM DATE: 07Apr65 / ORIG REF: 007

Card 1/1

STRAKHOVSKAYA, Ye., kand. sel'skokhoz. nauk; KERIMOV, S., mladshiy nauchnyy sotrudnik

Protecting sweet cherries from the cherry fruit fly Rhagoletis cerasi L. Zashch. rast. ot vred. i bol. 10 no.7:53 '65. (MIRA 18:10)

1. Dagestanskiy nauchno-issledovatel'skiy institut sel'skogo khozyaystva.

* ~~KERIMOV, D.M.~~, zaslushennyy deyatel' nauki, prof., IRANI, M., kand.med.nauk
KERIMOV, S. M.

Dynamics of cardiovascular diseases and prophylactic measures.
Azerb.med.zhur. no.2:63-68 F '58 (MIRA 11:12)

1. Iz gospital'noy terapevticheskoy kliniki (russkogo sektora) (zav. - zaslyzhennyy deyatel' nauki, prof. D.M. Abdulayev) Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta im. N. Narimanova (direktor - zaslushennyy deyatel' nauki, prof. B.A. Kyvazov).
(CARDIOVASCULAR SYSTEM--DISEASES)

* KERIMOV D. M Should be ABDULAYEV D. M.

KERIMOV, S.M.

Characteristics of arterial pressure in inhabitants of mountainous areas of Azerbaijan. Azerb.med.zhur. no.3:104-105 Mr '58
(MIRA 11:7)

(AZERBAIJAN--BLOOD PRESSURE)
(ALTITUDE, INFLUENCE OF)

KERIMOV, S.M.

Hemodynamic and basal metabolism changes in anemia in connection with blood transfusion. Azerb.med.zhur. no.3:66-72 Mr '59. (MIRA 12:6)

1. Iz kafedry gospital'noy terapii russkogo sektora (zav. kafedroy - zasluzh.deyatel'nauki, prof.D.M.Abdullayev) Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta im. N.Narimanova.

(BLOOD--CIRCULATION) (ANEMIA) (METABOLISM)

KERIMOV, S. M., Cand Med Sci -- (diss) "Changes in the cardiovascular system in anemias in connection with blood transfusion." Baku, 1960. 16 pp; (Azerbaydzhanskiy State Medical Inst im N. Narimanov); 250 copies; free; (KL, 19-60, 138)

KERIMOV, S.M.

С. М. Керимов защитил 23/VI 1960 г. в Совете Азербайджанского медицинского института диссертацию на тему «*Изменения сердечно-сосудистой системы при анемиях в связи с переливанием крови*».

Установлены значительные изменения со стороны кровообращения у больных тяжелой формой анемий, уточнены некоторые патогенетические механизмы влияния гемотрансфузии на состояние сердечно-сосудистой системы и доказана обратимость этих нарушений у значительной части больных. Предложены рациональные методики комплексного лечения.

Candidate of Medical Sciences

Dissertations approved by the Higher Attestation Commission in January and February of 1961. Terap. arkh. no.6:117-121 '61

KERIMOV, S.M.

Comparative evalutaion of the effectiveness of new diuretic remedies in circulatory insufficiency. Azerb. med. zhur. no.1:35-39 Ja '62. (MIRA 16:5)
(DIURETICS AND DIURESIS) (BLOOD—CIRCULATION, DISORDERS OF)

KERIMOV, S.M., starshiy nauchnyy sotrudnik; AKOPYAN, S. Kh., starshiy nauchnyy sotrudnik; TAGIZADE, Z.A., starshiy nauchnyy sotrudnik; ABDULAYEVA, L.D., mladshiy nauchnyy sotrudnik

Study of atherosclerosis; cholesterol content of the blood in persons engaged in physical labor. Azerb. med. zhur. 41 no.2: 42-48 F '64 (MIRA 18:1)

1. Iz otdela kardiologii (zav. - chlen-korrespondent AN Azerbaydzhanskoy SSR, prof. D.M. Abdylayev) IEKM AMN SSSR, Baku.

KERIMOV, S.M.; TAGIZADE, Z.A.

Electrocardiographic shifts in patients with thyrotoxicosis under the influence of various methods of therapy. Report No.2. Azerb. med. zhur. 42 no.2:32-36 F '65. (MIRA 18:7)

KERIMOV, S.Sh.; DRANITSYNA, Yu.A.

Study of coumarins and furocoumarins of Hippomarathrum caspium (DC) Grossh. Khim. prirod. soed. no.5:356-359 '65.
(MIRA 18:12)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR.
Submitted June 5, 1965.

DRANITSYNA, Yu.A.; KERIMOV, S.Sh.; PIGULEVSKIY, G.V.

Furocoumarins in fruits of fennel Hippomarathum microcarpum (MB)B
Fedtsch. Zhur. prikl. khim. 38 no.5:1172-1174 My '65.
(MIRA 18:11)

1. Botanicheskiy institut AN SSSR.

KERIMOV, S.Sh.

Coumarins and furocoumarins from roots of Hippomarathrum microcarpum (M.B.) B.Fedtsch. Zhur.prikl.khim. 38 no.11:2566-2569 N '65. (MIRA 18:12)

1. Submitted March 18, 1965.

KERIMOV, Sh.B.

KEREMOV, N.K.; MUSEIBOV, M.A.; KERIMOV, Sh.B.

Karst caverns on the right bank of the Okhchi-chay River [in Azerbaijani with summary in Russian]. Uch.zap.AGU no.2:39-47 '55. (MLRA 9:12)

(Aksakyulum Range--Caves)

KERIMOV, Sh.B.

Landslides in the Vel'vil'-chay Valley [in Azerbaijani with summary in Russian]. Uch.zap.AGU no.4:51-59 '55. (MLRA 9:12)
(Vel'vil'-chay Valley--Landslides)

MUSEIBOV, M.A.; KERIMOV, Sh.B.

Clayey karst of the Tugchay River Basin. Uch. zap. AGU no.5: 31-34 '55. (MLRA 9:12)

(Tugchay Valley--Karst)

15-57-10-14705

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, p 223 (USSR)

AUTHORS: Museibov, M. A., Kerimov, Sh. B., Gasanov, M. M.

TITLE: Slides on the Northeastern Slope of the Greater Caucasus in Azerbaidzhan (Ob opolznyakh na severo-vostochnom sklone Bol'shogo Kavkaza v Azerbaydzhane)

PERIODICAL: Uch. zap. Azerb. un-t, 1956, Nr 7, pp 41-45

ABSTRACT: In the basin of the Vel'velichay and along the valleys of the Atagay, Gil'gil'chay, Divichichay, and Shabranchay Rivers, ancient and recent slides are encountered, formed in clay horizons of an argillaceous-calcareous complex. A number of them are described. The author points out that the slides should be studied as complex features, considering not only the climatic, lithologic, geomorphic, and hydrogeological factors, but also the seismicity of the region. The climatic factor carries special significance. The authors note

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Slides on the Northeastern Slope of the Main (Cont.)

that slides in this region frequently move in a direction that does not coincide with the dip of the beds.

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N. S. Gustomesova

KERIMOV, Sh. B.

Classification of the physicogeographical units of the local types in the basin of the Akera River and the Zangelan area. Uch. zap. AGU. Geol-geog. ser. no.2:107-116 '59. (MIRA 14:6)
(Azerbaijan—Physical geography)

14-57-6-11862

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6, p 31, (USSR)

AUTHOR: Kerimov, Sh. B.

TITLE: Sand Relief of the Apsheron Peninsula (Rel'yef peskov Apsheronskogo poluostrova--in Azerbaidzhan)

PERIODICAL: Uch. zap, Azerb. un-ta, 1956, Nr 9, pp 35-45

ABSTRACT: In recent years the area of sand on the Apsheron peninsula has increased, due to the fact that the level of the Capsian Sea was lowered, the climate grew more arid, gales became more frequent, man was active in building highways and opening quarries, etc. More than 3 000 hectares are covered with mobile sand. Under-developed dunes from 1.5 m to 2 m high are found in the interior of the peninsula, where the sand is formed by Tertiary rock weathering. The form of the sand relief is determined by mechanical composition of weathered rocks. Coastal dunes from 14 m to 15 m high are made

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Sand Relief of the Apsheron Peninsula (Cont.)

mainly of marine sand. On the north coast, where gales blow from 106 to 139 days a year, large sand relief forms develop, and parallel sand ridges are located.

G. K.

Card 2/2

KERIMOV, Sh.B.; SHIRINOV, N.Sh.

Geomorphology of the southeastern foothills of the Lesser Caucasus; interfluve of the Akera and the Gendelanchay. Uch.zap.AGU. Geol.-geog.ser. no.3:69-78 '60. (MIRA 14:6)
(Caucasus--Physical geography)

KERIMOV, Sh. B.; KISIN, I. M.; AGAYEV, Sh. M.

Distribution of atmospheric precipitation in the Kishbay basin based on the data of total precipitation gauges. Uch. zap. AGU. Geol.-geog. ser. no.1:71-78 '62.
(MIRA 16:1)

(Kishchay Valley--Precipitation(Meteorology))

KERIMOV, T.M.

Solving a boundary problem for polyharmonic equations. Uch. zap.AGU.Fiz.-mat.i khim.ser. no.1:49-61 '59.
(MIRA 13:6)
(Integral equations)

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AUTHOR: Kerimov, T. M.

TITLE: On a boundary value problem for elliptic equations

PERIODICAL: Referativnyy zhurnal, Matematika, no. 1, 1962, 49-50, abstract 1B236. ("Uch. zap. Azerb. un-t. Fiz.-matem. i khim. ser.", 1959, no. 4, 9-20)

TEXT: Let S^+ be a finite closed simply connected domain which is bounded by a simple smooth closed curve L, and let S^{-1} be the infinite domain outside of L. Searched is a real function u(x,y), satisfying in S^+ the equation

$$\Delta^n u + \sum_{k=1}^{n} \sum_{p,q=0}^{p+q \le k} A_{pq}^{(k)}(x,y) \frac{\partial^{p+q}}{\partial x^p \partial y^q} (\Delta^{n-k} u) = 0$$

in S^{-1} the equation

$$\Delta^n u = 0$$

on L the boundary conditions

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